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APPLICATION N	۱O.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,034		04/13/2001	Ronald D. Olsen	11983.0075	5118
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	12400 WILSHIRE BOULEVARD SEVENTH FLOOR			ART UNIT	PAPER NUMBER
LOS AN	GELES, C	CA 90025-1030	2116	· · · · · · · · · · · · · · · · · · ·	
	·			DATE MAILED: 08/26/2005	

Please find below and/or attached an Office communication concerning this application or proceeding.

)	Application No.	Applicant(s)					
Office Action Summer.	09/835,034	OLSEN ET AL.					
Office Action Summary	Examiner	Art Unit					
The MAN INC DATE of this commission	Tse Chen	2116					
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply							
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timety filed after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).							
Status							
2a) ☐ This action is FINAL . 2b) ☐ This 3) ☐ Since this application is in condition for allowan	, —						
Disposition of Claims							
4a) Of the above claim(s) is/are withdray 5) ☐ Claim(s) is/are allowed. 6) ☑ Claim(s) 1-4,6-22 and 24-34 is/are rejected. 7) ☐ Claim(s) is/are objected to.	6)⊠ Claim(s) <u>1-4,6-22 and 24-34</u> is/are rejected.						
Application Papers							
9) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner: Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.							
Priority under 35 U.S.C. § 119							
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 							
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 5) Notice of Informal Patent Application (PTO-152) Potent and Trademark Office.							

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DETAILED ACTION

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment dated July 18, 2005.

2. Claims 1-4, 6-22 and 24-34 are presented for examination. Applicant has canceled claims 5 and 23.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- 4. Claims 1-4 and 19-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Cave, US Patent 6232808.
- 5. In re claim 1, Cave discloses a method to determine when to send a signal [col.1, ll.11-17], comprising:
 - Receiving a set of durations [relative timing values], the set of durations including at least two time durations, each duration corresponding to a respective action signal [alert signal corresponding to each EID] to be sent at the end of the respective duration [fig.2a; col.3, 1.6 col.4, 1.49; col.5, 11.42-54; relative timing values converted to absolute timing values which indicate the end of duration and the associated sending of the alert signal].

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• Determining an expiration time [absolute timing value or TV as used in the detailed description] corresponding to each duration [relative timing value] [col.5, ll.42-54; each relative timing value converted to absolute timing value to be stored].

- Selecting the expiration time that is first to occur to provide a selected expiration time
 [col.3, Il.25-50; the earliest absolute timing value is effectively selected to be in the front
 of the stack due to the chronological ordering as simply illustrated in the case with two
 elements in a stack, the earlier absolute time would be selected first in order to be
 chronologically correct].
- Determining when the selected expiration time occurs by setting a clock to send a signal at the expiration time [col.7, Il.25-33].
- Sending the action signal [alert signal corresponding to each EID] corresponding to the selected expiration time [absolute timing value] when the selected expiration time occurs [col.3, ll.6-24].
- 6. As to claim 2, Cave discloses the method wherein determining an expiration time [absolute timing value] corresponding to each duration [relative timing value] includes determining a received time [current timing value] for each duration [col.5, ll.42-54; current timing value is tagged to each relative timing value to calculate the associated absolute timing value].
- 7. As to claim 3, Cave discloses the method wherein determining an expiration time corresponding to each duration further includes adding each duration [relative timing value] to its corresponding received time [current timing value] [col.5, II.42-54].

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8. As to claim 4, Cave discloses the method wherein selecting the expiration time that is first to occur includes comparing the expiration times to determine which of the expiration times is first to occur [col.3, ll.25-50; the earliest absolute timing value is effectively selected to be in the front of the stack due to the chronological ordering as simply illustrated in the case with two elements in a stack, the absolute times would be compared and the earlier time would be selected first in order to be chronologically correct].

9. In re claims 19-22, Cave taught method as discussed above in reference to claims 1-4; therefore, Cave taught article of manufacture¹.

Claim Rejections - 35 USC § 103

- 10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- Claims 6-9 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cave, in view of Short et al., U.S. Patent 5708814, hereinafter referred to as Short, and Devanagundy et al., U.S. Patent 6002737, hereinafter referred to as Devanagundy.
- 12. As per claim 6, Cave taught an invention to time irregular interval events, the invention comprising of:
 - Determining a first expiration time [tv1] and a second [tv2] expiration time [fig. 2b; col.5, ll.42-54; col.7, ll.1-6].

¹ Tanenbaum, "Structured Computer Organization", 2nd Edition, pg.11 as cited in first Office Action.

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• Comparing the first expiration time to the second expiration time [col.7, Il.17-21].

- Selecting the first expiration time if the first expiration time is less than the second expiration time and selecting the second expiration time if the second expiration time is less than the first expiration time [col.7, ll.15-17, ll.27-29, when there are two elements in a queue, the lesser (earlier) expiration time would be selected to be loaded into the compare register due to the chronological ordering of the expiration times].
- Setting a signal send time approximately equal to the selected one of the expiration times [col.7, ll.29-32; the signal send time is set to the selected expiration time upon loading of the compare register].
- 13. However, Cave did not expressly disclose a way to handle events that have expiration times that are approximately equal.
- 14. Short taught an invention to handle multiple events, the invention comprising of:
 - Selecting both the first and second expiration times if the expiration times are
 approximately equal [col.3, ll.58-64; interrupt events have approximately equal
 expiration times as defined by the delay time value].
 - Setting a signal send time approximately equal to the first and second expiration times [col.4, II.9-12; col.6, II.12-15; approximately equal times defined by the delay time value will be selected to have a common interrupt].
- 15. However, Cave and Short did not expressly disclose a timing mechanism for generating a call back signal.
- 16. Devanagundy taught an invention to time multiple events, the invention comprising of:

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• Determining a start time [320] [col.6, ll.30-32].

- Determining a time difference between the signal send time and the start time [352] [col.6, ll.6-8, ll.33-40].
- Setting a time period approximately equal to the time difference [352] [col.6, ll.34-36];
- Setting a timer to send a callback signal at the end of the time period [col.5, 11.41-51].
- Starting the timer at the start time [col.6, 11.44-45].
- Once the timer sends the call back signal, sending the action signal(s) corresponding to the selected expiration time [col.6, ll.1-3, ll.10-14].
- 17. An ordinary artisan at the same time the invention was made would have been motivated to look for a more efficient way to handle multiple events with approximately equal request/expiration times [see Short: col.1, ll.13-50] and also different time out periods [see Devanagundy: col.1, ll.46-59].
- 18. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Short, Cave, and Devanagundy because of the aforementioned motivations and also their involvement in similar problems regarding the timing and handling of multiple events.
- 19. As per claim 7, Cave discloses each and every limitation of the claim as discussed above in reference to claims 1 and 2.
- 20. As per claim 8, Devanagundy taught determining an expiration time includes adding the corresponding duration and received time [430].

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21. As per claim 9, Case taught sequentially handling next event after expiration of previous event [col.7, ll.34-35].

- 22. As per claims 24-25, Short, Devanagundy and Cave taught method as discussed above in reference to claims 6-9; therefore, Short, Devanagundy and Cave taught article of manufacture.
- Claims 10 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Short, Cave, and Devanagundy as applied to claim 6 above, and further in view of Cave, U.S. Patent 6314524, hereinafter referred to as ReCave.
- 24. Short, Cave, and Devanagundy taught an invention to time multiple events with approximately equal expiration times and a callback timer.
- 25. However, Short, Cave, and Devanagundy did not expressly disclose a way to handle repetitive events.
- 26. ReCave taught an invention to time multiple events, the invention comprising of:
 - Checking a first indicator upon sending the first action signal, the first indicator corresponding to whether the first action signal should be sent again [301].
 - Determining a third expiration time if the first indicator indicates the first action signal should be sent again [305].
- 27. An ordinary artisan at the same time the invention was made would have been motivated to look for a way to handle repetitive events needed in applications such as computer screen updates [see ReCave: col.2, ll.40-67].
- 28. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of ReCave, Short, Cave, and Devanagundy

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because of the aforementioned motivation and also their involvement in similar problems regarding the timing and handling of multiple events.

- 29. Claims 11-12 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Devanagundy, in view of Cave.
- 30. As per claim 11, Devanagundy taught an invention to time multiple events, the invention comprising of:
 - Determining a start time [fig.4, item 320; col.6, ll.30-32];
 - Determining a time difference between the signal send time and the start time [352] [col.6, ll.6-8, ll.33-40];
 - Setting a time period approximately equal to the time difference [352] [col.6, ll.34-36];
 - Setting a timer to send a callback signal at the end of the time period [col.5, Il.41-51];
 - Starting the timer at the start time [col.6, ll.44-45]; and
 - Once the timer sends the call back signal, sending the action signal(s) corresponding to the selected expiration time [col.6, ll.1-3, ll.10-14].
- 31. However, Devanagundy did not disclose explicitly selecting an expiration time based on chronological order.
- 32. Cave taught an invention to time irregular interval events, the invention comprising of:
 - Receiving a set of at least two durations, each duration corresponding to a respective action signal to be sent at the end of the respective duration [fig.2a; col.3, l.6 col.4, l.49; col.5, ll.42-54].
 - Determining a received time for each duration to determine a corresponding

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expiration time [col.5, ll.42-54;].

- Determining an expiration time corresponding to each duration [col.5, ll.42-5].
- Determining an expiration time includes adding the corresponding duration and received time [col.5, ll.42-54].
- Determining a set of expiration times corresponding to a set of durations [fig.2B;
 col.7, ll.1-6];
- Comparing the first expiration time to the second expiration time [col.7, ll.17-21];
- Selecting the expiration time that is first to occur to provide a selected expiration time
 [col.7, ll.13-21]; and
- Setting a signal send time approximately equal to the selected one of the expiration times [col.7, Il.29-32].
- An ordinary artisan at the same time the invention was made would have been motivated to look for an efficient and cost-effective way to time events [see Cave: col.2, ll.39-47; col.4, ll.50-67; col.5, ll.4-54]. Additionally, having the capability to time events in a chronological manner complies with the expected functionality of a timer. It is only logical to time a series of events in a chronological manner to ensure total coverage of the events.
- Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Cave and Devanagundy because of the aforementioned motivations and also their involvement in similar problems regarding the timing of multiple events.
- 35. As per claim 12, Case taught sequentially handling next event after expiration of previous event [col.7, ll.34-35].

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36. As per claims 27-28, Devanagundy and Cave taught method as discussed above in reference to claims 11-12; therefore, Devanagundy and Cave taught article of manufacture.

- 37. Claims 13-14 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cave and Devanagundy as applied to claim 11 above, and further in view of Cave, U.S. Patent 6314524, hereinafter referred to as ReCave.
- 38. Cave and Devanagundy taught an invention to time multiple events with approximately equal expiration times and a callback timer.
- 39. However, Cave and Devanagundy did not expressly disclose a way to handle repetitive events.
- 40. ReCave taught an invention to time multiple events, the invention comprising of:
 - Checking a first indicator upon sending the first action signal, the first indicator corresponding to whether the first action signal should be sent again [fig.3; 301].
 - Determining a third expiration time if the first indicator indicates the first action signal should be sent again [fig.3; 305].
- An ordinary artisan at the same time the invention was made would have been motivated to look for a way to handle repetitive events needed in applications such as computer screen updates [see ReCave: col.2, II.40-67].
- Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of ReCave, Cave, and Devanagundy because of the aforementioned motivation and also their involvement in similar problems regarding the timing and handling of multiple events.

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43. Claims 15-16 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basso et al., U.S. Patent 5491815, hereinafter referred to as Basso, in view of Cave and Devanagundy.

- 44. As per claim 15, Basso taught an invention to handle multiple timers, the invention comprising of:
 - Receiving first timing information corresponding to a first action signal, the first timing information including a first duration and a first flag [col.4, ll.46-53].
 - If the first flag indicated an active status, determining a first expiration time, and including the first expiration time in a set of expiration times to be considered [col.6, ll.59-63].
 - Doing likewise as first timing information when receiving second timing information [col.3, Il.24-35].
- 45. However, Basso did not expressly disclose selecting an expiration time based on chronological order.
- 46. Cave taught an invention to time irregular interval events, the invention comprising of:
 - Receiving a set of expiration times, each expiration time corresponding to a respective action signal to be sent at the end of the expiration time [col.7, ll.1-17].
 - Selecting the expiration time that is first to occur to provide a selected expiration time [col.7, ll.13-21].
- 47. However, Cave and Basso did not expressly disclose a timing mechanism for generating a call back signal.
- 48. Devanagundy taught an invention to time multiple events, the invention comprising of:

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• Determining a start time [320] [col.6, ll.30-32].

- Determining a time difference between the signal send time and the start time [352] [col.6, ll.6-8, ll.33-40].
- Setting a time period approximately equal to the time difference [352] [col.6, ll.34-36].
- Setting a timer to send a callback signal at the end of the time period [col.5, ll.41-51].
- Starting the timer at the start time [col.6, ll.44-45].
- Once the timer sends the call back signal, sending the action signal(s) corresponding to the selected expiration time [col.6, ll.1-3, ll.10-14].
- An ordinary artisan at the same time the invention was made would have been motivated to look for an efficient and cost-effective way to time events [see Cave: col.2, ll.39-47; col.4, ll.50-67; col.5, ll.4-54] with different time out periods [see Devanagundy: col.1, ll.46-59]. Additionally, having the capability to time events in a chronological manner complies with the expected functionality of a timer. It is only logical to time a series of events in a chronological manner to ensure total coverage of the events.
- Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Basso, Cave, and Devanagundy because of the aforementioned motivations and also their involvement in similar problems regarding the timing and handling of multiple events.
- As per claim 16, Basso taught at least one of the flags corresponding to the selected expiration time is set to an inactive status once the corresponding action signal is sent [col.8, ll.59-65].

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As per claims 31-32, Basso, Devanagundy and Cave taught method; therefore, Basso, Devanagundy and Cave taught article of manufacture.

- 53. Claims 17-18 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basso, Cave, and Devanagundy as applied to claim 15 above, and further in view of ReCave.
- Basso, Cave, and Devanagundy taught an invention to sequentially handling next event after expiration of previous event [see Cave: col.7, ll.34-35] with status flags and a callback timer.
- However, Basso, Cave, and Devanagundy did not expressly disclose a way to handle repetitive events.
- 56. ReCave taught an invention to time multiple events, the invention comprising of:
 - Checking a first indicator upon sending the first action signal, the first indicator corresponding to whether the first action signal should be sent again [fig3; 301].
 - Determining a third expiration time if the first indicator indicates the first action signal should be sent again [fig.3; 305].
- 57. Since the flag as taught by Basso is used to indicate active or inactive status of the event entity, the determination of a third expiration time based on the first indicator as taught by ReCave would logically have depended upon the checking of the status flag.
- An ordinary artisan at the same time the invention was made would have been motivated to look for a way to handle repetitive events needed in applications such as computer screen updates [see ReCave: col.2, 11.40-67].
- 59. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of ReCave, Basso, Cave, and Devanagundy

because of the aforementioned motivation and also their involvement in similar problems regarding the timing and handling of multiple events.

Response to Arguments

- 60. Applicant's arguments filed July 18, 2005 have been fully considered but they are not persuasive.
- Applicant alleges that in Cave, "there is no disclosure in ... portion [col.7, ll.25-33] ... that either clock 201 or clock register 202 is either 'set' or that such setting 'sends a signal at the expiration time'". Examiner disagrees and submits: firstly, in order for a clock or register to have any value, the register must have been inherently "set"; and secondly, a signal [of value; i.e., data] in the broadest interpretation is issued at every instance from 201 and 202 of counting time in order for the value to be updated, including at the expiration time when the values in both compare and clock registers match.
- Applicant alleges that in Cave, "there is every indication that both clock 201 and clock register 202 are free running". Firstly, Examiner is not aware of any teaching in Cave or in the art that precludes free running clocks from being "set". Secondly, Examiner is not aware of any registers that can be "free running" Applicant is invited to clarify the term "free running" if it departs from the regular usage in the art.
- Applicant alleges that in Cave, "it is comparator 203, and not either of elements 201 or 202 that sends out a signal". In response, Examiner points to Applicant's own concession that comparator 203 does send out a signal [interrupt], and submits that at least element 202 inherently sends out a signal [data of clock value] in order for the comparative action to result in 203 sending out the signal [interrupt based on comparison of 204 and updated 202].

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Applicant alleges that in Devanagundy, "counter 310 is plainly 'free-running' and the presence of register 320 does not make the resultant output settable to output a signal at an expiration time... merely establishes some starting reference point". In response, Examiner points to Applicant's own concession that there is a resultant output [STAT based on time-out or expiration] from some starting reference point [provided by 320] and submits that an expiration [time-out] time can be calculated from some starting reference point [expiration or time-out time = starting reference point + time-out value] as is well known in the art.

- Applicant alleges that in Devanagundy, "merely loading a value in register 320 does not reasonably teach or suggest 'starting the timer at the start time'". In response, Examiner points to Applicant's own concession that "register 320 ... merely establishes some starting reference point" and submits that Devanagundy does disclose explicitly starting a timer 300 at the start time provided by register 320 in order to have a "resultant output" at expiration.
- Applicant alleges that in Devanagundy, "the output STAT... does not reasonably correspond to the claimed 'call back signal'". Examiner disagrees and submits that the output STAT does reasonably correspond to the claimed "call back signal".
- Applicant alleges that ReCave "fails to teach or suggest either of the 'determining a first expiration time and a second expiration time' or the 'if the first expiration time is not approximately equal...' elements of claims 10 and 26". Examiner submits that the cited elements are not found in claims 10 and 26.
- Applicant alleges that Devanagundy "teaches away from adding the multiple events".

 Examiner disagrees as Examiner was not able to find any teaching in Devanagundy that explicitly stipulates against adding multiple events.

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69. Applicant alleges that ReCave "fails to teach or suggest either of the 'determining a received time' or the 'determining an expiration time' elements of claims 13, 14, 29 and 30". Firstly, Examiner submits that the cited element of "determining a received time" is not found in claims 13, 14, 29 and 30. Secondly, Examiner's position is that ReCave does teach "determining an expiration time" as discussed in the rejection.

- Applicant alleges that "the original references do not contemplate the added elements teaches away from adding both Cave and Devanagundy in the manner proposed" to Basso. Examiner disagrees and submits that the absence of "contemplation" does not teach away from adding references, as there are many inventions based on improvements in non-"contemplated" areas of prior art due to various motivations.
- Applicant alleges that ReCave "fails to teach or suggest either of the 'selecting an expiration time in the set that will occur first" element of claims 17, 18, 33 and 34". Examiner submits that the cited element is not found in claims 17, 18, 33 and 34.
- As demonstrated above, Applicant's arguments are not persuasive and the rejections are maintained. Additionally, all rejections of claim limitations as filed prior to Amendment dated July 18, 2005 not argued in entirety or substantively in response filed as said Amendment have been conceded by Applicant and the rejections are maintained from henceforth.

Conclusion

73. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tse Chen whose telephone number is (571) 272-3672. The examiner can normally be reached on Monday - Friday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tse Chen August 10, 2005